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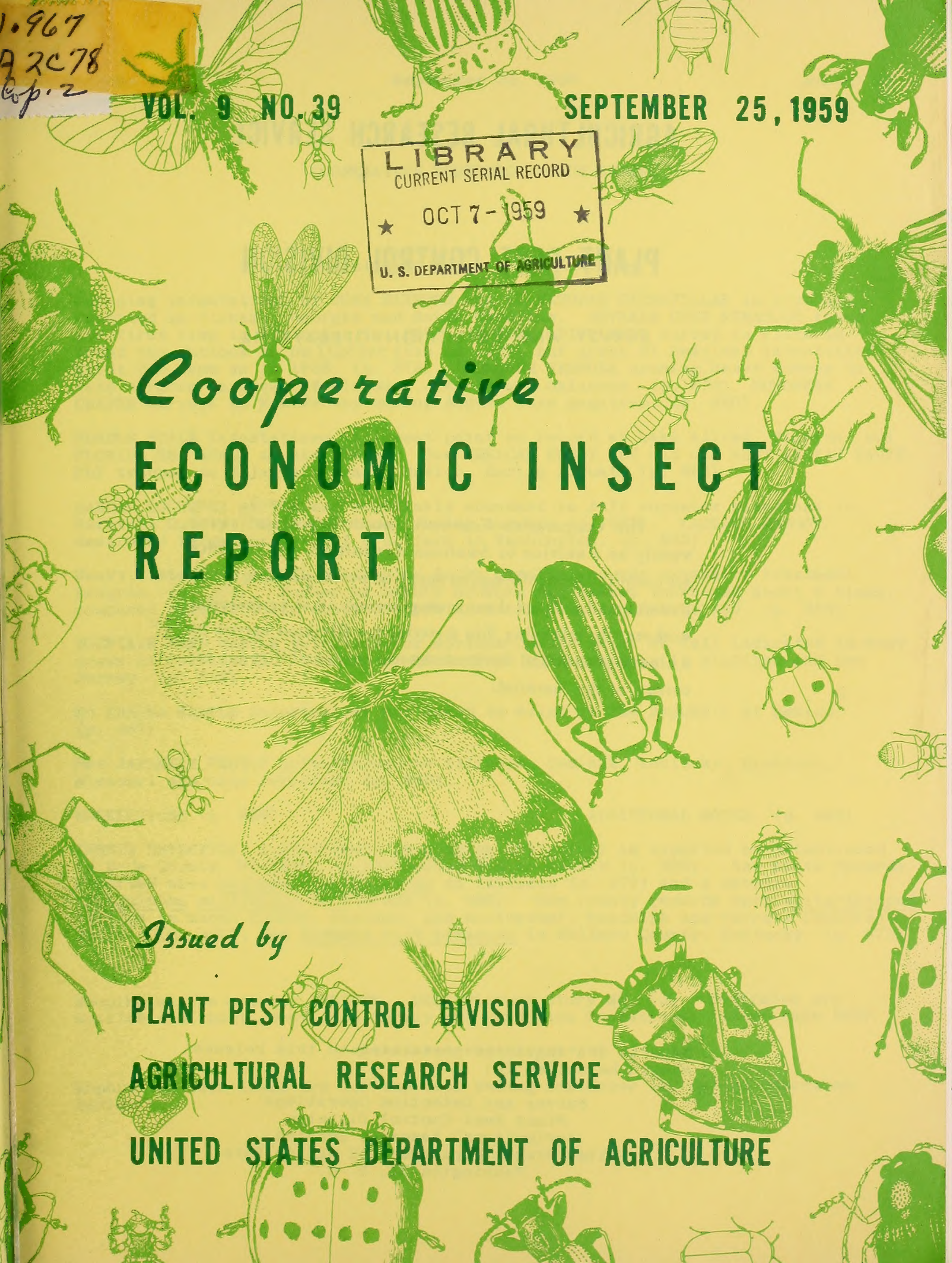

Cooperative ECONOMIC INSECT REPORT

Issued by

PLANT PEST CONTROL DIVISION
AGRICULTURAL RESEARCH SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

SURVEY AND DETECTION OPERATIONS

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Survey and Detection Operations
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

Volume 9 September 25, 1959 Number 39

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

Damaging infestations of CORN EARWORM and VELVETBEAN CATERPILLAR in soybeans reported in Alabama, Georgia and South Carolina. SOYBEAN CYST NEMATODE found for first time in Illinois. (p. 877). MEADOW SPITTLEBUG survey in Illinois found the outlook to be lighter than in 1958, but areas of heaviest infestation about the same as in 1958. (p. 879). SORGHUM WEBWORM causing heavy damage to late sorghum in areas of Missouri, Kansas and Oklahoma. (p. 879). EUROPEAN CHAFER surveys in New Jersey during August were negative. (p. 880).

PURPLE SCALE infestations at lowest point on record at Lake Alfred, Florida, but FLORIDA RED SCALE at high level. One MEXICAN FRUIT FLY and one WEST INDIAN FRUIT FLY trapped in Baja California, Mexico, during August. (p. 882).

BANDED CUCUMBER BEETLE was especially abundant in fall cucumber plantings in Barnwell County, South Carolina, during August. (p. 882). CABBAGE MAGGOT destroyed large acreages of crucifers in Washington. (p. 883).

Heavy, late BOLL WEEVIL buildup in South Carolina caused extensive treatment program. (p. 884). Number of SPRUCE BUDWORM egg masses increased about 3 times, compared with 1958, on about 600,000 acres in northern New Mexico. (p. 884).

MOUNTAIN PINE BEETLE potential for serious damage later in fall indicated in many areas of California. Summary of 1959 GYPSY MOTH trapping in Michigan and New Jersey. (p. 885).

No KHAPRA BEETLE infestations now known to exist in the Republic of Mexico. (p. 887).

New JAPANESE BEETLE infestations in Illinois, Indiana, Kentucky, Michigan, Missouri and Ohio reported. (p. 888).

CORRECTIONS (p. 889) ADDITIONAL NOTES (p. 889)

INSECT DETECTION: A bostrichid (Sinoxylon conigerum) is reported as established in Dade County, Florida. A new United States record (p. 886). New state records reported were soybean cyst nematode in Illinois (p. 877) and a webworm (Tetralopha militella) in Florida (p. 886). New county records were white-fringed beetles in Macon County, Alabama, and Meriwether, Randolph and Terrell Counties, Georgia (p. 880); and soybean cyst nematode in Ballard County, Kentucky. (p. 877).

Keeping an eye out for INSECTS. USDA Picture Story No. 120. Separates are available without cost from Survey and Detection Operations. (After page 882).

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Reports in this issue are for the week ending September 18, unless otherwise indicated.

WEATHER BUREAU 30-DAY OUTLOOK

MID-SEPTEMBER TO MID-OCTOBER 1959

The Weather Bureau's 30-day outlook for the period mid-September to mid-October calls for temperatures to average below seasonal normals over the eastern half of the Nation except for near normal along the Gulf Coast. The coldest areas are expected to be the Great Lakes, Ohio Valley and Northeast. Temperatures over the western half of the country are predicted to average near normal except for below normal over the Southern Plateau and above normal in Montana, Wyoming and coastal California. Precipitation is expected to be subnormal over the northeastern quarter of the Nation. Above normal amounts are predicted for the southeast quarter, the Central Plains, the Rocky Mountain States and California. In unspecified areas about normal amounts are indicated.

Weather forecast given here is based on the official 30-day "Resume and Outlook," published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D. C. Price $4.80 a year, $2.40 a half year.

WEATHER OF THE WEEK ENDING SEPTEMBER 21

An unusually large high pressure area covered the Nation east of the Rocky Mountains most of this week. The center of this large mass of cold, dry air moved slowly from central Canada to the Middle Atlantic States, and the clockwise flow of air around the High pushed deep into the Southeastern States. West of the Rocky Mountains cool Pacific air covered most areas throughout the week. These large surges of cold air served to keep temperatures much-below-seasonal levels over all the Nation, with the exception of a portion of the southern Great Plains and Rocky Mountains and small sections along the immediate Pacific coast. Record-breaking cold temperatures were recorded in large numbers from the Great Lakes and Ohio Valley to New England, as minima in the 30's were general at midweek in New York and New England, the Great Lakes States, and the northern Great Plains, falling below 20° at higher elevations in New York and New England. As the high pressure area moved eastward, strong, gusty, southerly winds swept across the Great Plains returning 80° and 90° temperatures, which continued from Texas to the desert Southwest through the week, to the lower Great Lakes, and upper Ohio and Mississippi Valleys.

Precipitation was heavy over parts of the Southeastern States, the central Great Plains, most of the Pacific Northwest, central California, and in scattered areas in the Plateau States, the central Great Lakes, and New England. Continuing thunderstorms in Florida again left scattered excessive precipitation totals, up to 8-10 inches in scattered locations of the northwestern Peninsula. The first rain of consequence in Kansas in 2 weeks left from 1/2 to 3 inches over most of the State. Generous totals extended into other areas of the central and northern Great Plains. A large low pressure area brought abnormally heavy September rainfall over central California, totaling 2 to 4 inches locally, with larger totals and heavy snow at higher elevations in the Sierras. Heavy thunderstorms over the Central and Northern Plateau States improved moisture conditions. The September total of 1.90 inches so far at Boise, Idaho, is the second highest there in 61 years. (Summary supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

CORN EARWORM (Heliothis zea) - ALABAMA - Moderate infestation on soybeans in St. Clair County. (Grimes). GEORGIA - Heavy infestations on soybeans in Baldwin County. (Johnson). SOUTH CAROLINA - A major problem in soybean fields in Richland, Calhoun, Orangeburg, Florence, Clarendon and Darlington Counties. (Nettles et al., Sept. 9). Became very serious on soybeans in Allendale County. (Nettles et al.). VIRGINIA - Infestations generally light in soybeans, few heavy infestations present. Reinfestations, if they occur, will probably not be sufficiently heavy to necessitate control measures in most cases. (Morris et al.). MARYLAND - Several heavy larval infestations noted on soybeans in St. Marys County. (U. Md., Ent. Dept.). MISSOURI - Damage to late grain sorghum throughout the State continues. Larval counts range 5-45 per 100 heads in northern area and 100-105 per 100 heads in central area. (Kyd, Thomas, Munson). OKLAHOMA - Counts averaged 1 per sweep in alfalfa in southeastern area. (VanCleave, Goin, Drew). In field of peanuts in Payne County, counts averaged 25 infested terminals per 100 terminals examined. (Manley, Walton). CALIFORNIA - Causing severe damage to alfalfa in El Centro area, Imperial County. (G. D. Peterson). OREGON - Damaging sweet corn in Corvallis area, with 50-75 percent infestation appearing. Damage greater than in past years at this time. (Crowell, Sept. 14).

VELVETBEAN CATERPILLAR (Anticarsia gemmatalis) - ALABAMA - Heavy infestations on soybeans in Chilton and St. Clair Counties. (Grimes). GEORGIA - Heavy infestations on soybeans in Baldwin County. (Johnson). SOUTH CAROLINA - Marked increase in activity over previous week on soybeans. Severe stripping of leaves observed. (Nettles et al., Sept. 9). Causing more damage to soybeans in Dorchester County than previously observed and are unusually abundant in Orangeburg County. Also damaging soybeans in several other counties. (Nettles et al.). NORTH CAROLINA - About 50 percent of soybean pods damaged in Lenoir, Johnston and Wayne Counties. (Scott, Farrier). VIRGINIA - Heavy in one field of very late soybeans in Middlesex County. (Settle). An occasional larva observed on soybeans in New Kent, James City, Gloucester and Middlesex Counties. (Morris et al.).

GREEN CLOVERWORM (Plathypena scabra) - ARKANSAS - Peak of infestation on soybeans occurred about a week ago. Considerable acreage has been treated for P. scabra and Heliothis zea on soybeans. Ranged 10-20 per 10 sweeps in alfalfa on University of Arkansas farm at Lafayette. (Ark. Ins. Sur.). MISSOURI - Larval counts in late soybeans in northeast area ranged 0-5 per square foot. (Kyd, Thomas, Munson). OKLAHOMA - Counts ranged 0.1-1.5 per sweep in alfalfa in southeastern area. (VanCleave, Goin, Drew).

SOYBEAN CYST NEMATODE (Heterodera glycines) - ILLINOIS - Found for first time in State on a farm at Mounds, Pulaski County. Collections confirmed September 18. Delimiting surveys being conducted. (Ill. Dept. Agr., PPC). KENTUCKY - Ballard County found infested for first time. Infestations total 50 acres on 2 properties. As of August 31, 16 properties representing 1,055 acres known to be infested in Ballard and Fulton Counties. MISSOURI - Additional infestations found on 19 properties. As of August 31, 204 properties representing 6,928 acres, known to be infested in the State. (PPC, Cent. Reg., Aug. Rpt.). NEW JERSEY - Symptom surveys conducted on 1,077 properties representing 2,302 acres over State. Results negative. VIRGINIA - Symptom surveys begun in 11 eastern counties, with a total of 2,378 properties being checked on which 305 soil samples were taken from 177 properties. MARYLAND - Fifteen properties representing 227 acres surveyed, with negative results. (PPC. East. Reg., Aug. Rpt.).

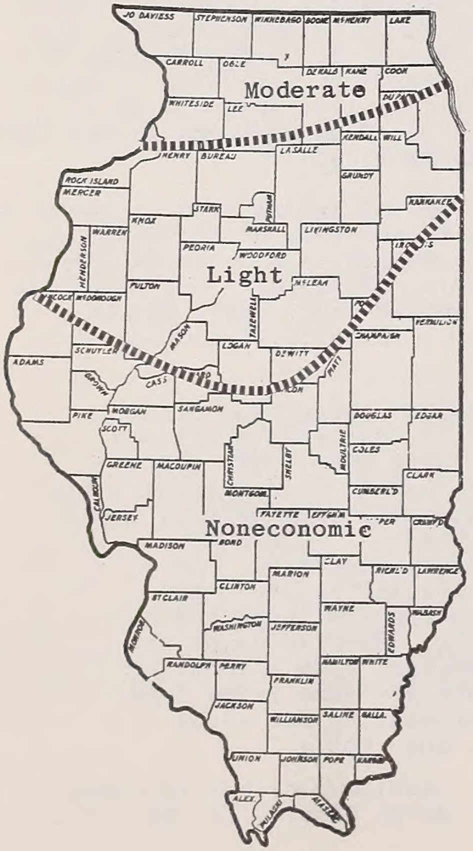
BEAN LEAF BEETLE (Cerotoma trifurcata) - MARYLAND - Adults continue to cause moderate to heavy damage to soybean foliage in St. Marys County. (U. Md., Ent. Dept.).

MEXICAN BEAN BEETLE (Epilachna varivestis) - NEW MEXICO - Damage to foliage severe in pinto bean fields in San Juan and Bernalillo Counties. (N. M. Coop. Rpt.).

SPOTTED ALFALFA APHID (Therioaphis maculata) - ARKANSAS - Infestations built up in alfalfa in northwestern area. Counts 200-300 per 10 sweeps on University of Arkansas farm at Lafayette. (Ark. Ins. Sur.). OKLAHOMA - Counts 0-4 per sweep in alfalfa fields in extreme southeastern area. Populations slightly increased, compared with past few weeks. (VanCleave, Goin, Drew). NEBRASKA - Counts in Deuel County ranged 20-40 per sweep in alfalfa left for seed. Numbers lower in Cheyenne County, ranging 8-15 per sweep. (Andersen). NEW MEXICO - Generally light on alfalfa in San Miguel, Quay, Colfax, Rio Arriba and San Juan Counties. (N. M. Coop. Rpt.). COLORADO - Counts per 200 sweeps in alfalfa were 750 in Garfield County, 200 in Fremont County, and ranged 0-200 in Pueblo, Crowley, Bent, Otero and Prowers Counties. (Colo. Ins. Sur., Sept. 15). UTAH - Generally light, reported as far north as Weber County. (Knowlton, Sept. 10).

PEA APHID (Macrosiphum pisi) - NEBRASKA - Averaged 20 per 10 sweeps most alfalfa fields in southeastern area. (Webb). OKLAHOMA - Limited numbers present in alfalfa in extreme southeastern area. (VanCleave, Goin, Drew). NEW MEXICO - Appears to be building up in alfalfa in Mora and San Juan Counties. (N. M. Coop. Rpt.). UTAH - Populations moderate in alfalfa throughout Uintah Basin in Uintah and Duchesne Counties. (Knowlton).

Adult Meadow Spittlebug Survey in
Illinois - 1959



MEADOW SPITTLEBUG (Philaenus leucophthalmus) - ILLINOIS - Survey conducted from August 17 to September 11. Average number of adults per sweep was 1.01 for the State, compared with 1.48 in 1958. Outlook is better than in 1958, but the areas of heaviest infestations remain the same as in previous years (see map for population ratings). In northern area of State, where populations were rated moderate, average counts per sweep were 3.11 in Stephenson County, 3.66 in Boone County, 2.75 in Lake County, 4.44 in Ogle County, 2.44 in Kane County and 3.24 in Whiteside County. (Ill. Ins. Rpt.).

TARNISHED PLANT BUG (Lygus lineolaris) - ARKANSAS - Averaged 10-12 per 10 sweeps in alfalfa on University of Arkansas farm at Lafayette. (Ark. Ins. Sur.). NORTH DAKOTA - Counts in alfalfa in eastern area ranged 2-21 per 25 sweeps. (N. D. Ins. Rpt.). NEBRASKA - Counts in most alfalfa fields in southeastern counties averaged 20 per 10 sweeps. Counts ranged 2-4 per 10 sweeps in eastern counties. (Webb).

LYGUS BUGS (Lygus spp.) - SOUTH DAKOTA - Averaged 5 adults per 10 sweeps on alfalfa in southeastern area. (Hantsbarger). NEW MEXICO - Nymphs very abundant in alfalfa in Mora, Quay and San Juan Counties. (N. M. Coop. Rpt.) OREGON - Adults abundant in alfalfa fields, gardens and flower beds in Pendleton vicinity. No serious damage noted. (Chinn, Sept. 11). OKLAHOMA - Counts averaged 1 per sweep in alfalfa fields in southeastern area. (VanCleave, Goin, Drew).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - OKLAHOMA - Populations continue common in alfalfa in southeastern area, counts ranging 1-3 per sweep. (VanCleave, Goin, Drew). NEW MEXICO - Averaged 2-3 per sweep in alfalfa in Mora, Quay and San Juan Counties. (N. M. Coop. Rpt.). SOUTH CAROLINA - In some alfalfa fields, 5 percent of stems turned yellow from attacks by this insect. (Nettles et al.).

ALFALFA CATERPILLAR (Colias philodice eurytheme) - SOUTH DAKOTA - Larval counts 15-20 per 10 sweeps in alfalfa in southeastern area. (Hantsbarger). ARKANSAS - Averaged 2-3 per 10 sweeps in alfalfa on University of Arkansas farm at Lafayette. (Ark. Ins. Sur.). OKLAHOMA - Counts averaged 0.1 per sweep in alfalfa fields in southeastern area. (VanCleave, Goin, Drew). NEW MEXICO - Averaged about 2 per 10 sweeps in alfalfa fields in Mora, Quay, Colfax, San Juan and Bernalillo Counties. (N. M. Coop. Rpt.).

CABBAGE LOOPER (Trichoplusia ni) - OKLAHOMA - Counts averaged 1.1 per sweep in alfalfa fields in southeastern area. (VanCleave, Goin, Drew).

A CATERPILLAR (Nomophila noctuella) - OHIO - Mostly in pupal and adult stages in Wayne County on September 16. There was apparently a high degree of parasitism of larvae. Parasitic wasps emerged from cocoons within one hour after being brought into the laboratory. (Treece).

WEBWORMS (Loxostege spp.) - CALIFORNIA - Causing severe damage to alfalfa in El Centro area, Imperial County. (G. D. Peterson).

PEA WEEVIL (Bruchus pisorum) - WASHINGTON - Adults moving into hibernation during first two weeks in September in Palouse region; becoming a minor household pest. Observations indicate that this insect is becoming harder to control with current program, also that it has been considerably more abundant in 1958 and 1959 than during preceding years. (Johansen).

A SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata tenella) - NEW MEXICO - Averaged about 3 per sweep in alfalfa in Bernalillo County. (N. M. Coop. Rpt.).

THRIPS (undetermined) - UTAH - Very numerous in alfalfa seed crops at Lapoint and in Ouray Valley in Uintah County. (Knowlton).

SORGHUM WEBWORM (Celama sorghiella) - MISSOURI - Counts in late sorghum in central area averaging 700 larvae per 100 heads. Some sorghum heads in Scotland County (extreme northeast) completely devoid of grain because of damage caused by this pest. (Kyd, Thomas, Munson). KANSAS - Damaging late maturing grain sorghum in Elk and Montgomery Counties. (Gates). OKLAHOMA - Heavy damage noted in several fields of grain sorghum in southeastern area. Most larvae in late instars, with pupae and adults common most fields. (VanCleave, Goin, Drew). Counts averaged 15 larvae per seed head in sorghum field in Marshall County (Vinson) and 30 per seed head in sorghum field in Muskogee County (Bower, Washum).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - KANSAS - Few larvae found in corn plants in few fields in southeast and east central areas. (Peters). NEW MEXICO - Corn in Quay County heavily infested, causing severe lodging of stalks. (N. M. Coop. Rpt.).

EUROPEAN CORN BORER (Pyrausta nubilalis) - NEBRASKA - Corn fields in southeastern counties contained very low populations of second-brood larvae. An occasional larva found in sorghum in eastern counties. (Webb). KANSAS - Percent infestation in corn ranged 0-80, with 0-170 larvae per 100 plants in southeast and east central areas. (Peters).

A SKIPPER (Lerodea eufala) - CALIFORNIA - Light infestation of milo occurred, scattered over plantings in Hamilton City area of Glenn County. (Dr. W. H. Lange).

WHEAT JOINTWORM (Harmolita tritici) - ILLINOIS - Percent of tillers infested in 1959 averaged 5.11, compared with 6.13 in 1958. (Ill. Ins. Rpt.).

GRASSHOPPERS - INDIANA - Noneconomic to light populations of Melanoplus spp. observed in alfalfa, clover and corn fields in Tippecanoe, Montgomery, Putnam, Owen, Clay and Park Counties. Populations averaged 98 percent M. femur-rubrum and 2 percent M. differentialis. Counts ranged 0.2-6 per square yard, but averaged less than 3 per square yard, generally. (Matthew). NEBRASKA - Populations of Melanoplus spp. low in southeastern counties, counts less than 1 per square yard in alfalfa and field margins. (Webb). NEW MEXICO - Heavy grasshopper populations causing minor damage to alfalfa in Maxwell-Springer area, Colfax County. Also heavy in corn and grain sorghum near Farley, Colfax County. Very little apparent damage. (N. M. Coop. Rpt.). COLORADO - Grasshopper counts per square yard by counties are as follows (rangeland counts first, crop rows and borders second): El Paso 3-5, 5-15; Lincoln 0-3, 0-5; Kiowa 0-1, 4-20; Crowley 0-2, 0-5; Prowers 0-1, 1-5; Baca 0-2, 1-5; Las Animas 0-1, 1-5; Huerfano 0-1, 0-5; Pueblo and Otero 0-1, 0-5; Custer and Fremont 0-1, 1-2. (Colo. Ins. Sur., Sept. 15).

WHITE-FRINGED BEETLES (Graphognathus spp.) - Infestations found for first time during August in Macon County, ALABAMA, and Meriwether, Randolph and Terrell Counties, GEORGIA. (PPC, So. Reg.). NEW JERSEY - Surveys conducted in Vineland area and at sites in Atlantic, Cumberland and Gloucester Counties were negative. VIRGINIA - Observations in 24 counties were negative. (PPC, East. Reg., Aug.Rpt.).

EUROPEAN CHAFER (Amphimallon majalis) - NEW YORK - Last adult recoveries in research traps at Phelps were made on August 4 and 17. Cooperative controls started on September 8 at 3 isolated infestations at Southport, Chemung County, and at Niagara Falls and Lockport in Niagara County. CONNECTICUT - No adults were taken in traps at Meriden nor were they observed during evening flight during the past season. NEW JERSEY - Seasonal survey work completed. Total of 108 sites at major approaches to Brooklyn and Staten Island were visually surveyed and statewide evening surveys were made at 76 area nurseries. Three traps in Hudson County were operated, with negative results. No infestations found in the State. (PPC, East. Reg., Aug. Rpt.).

FALL ARMYWORM (Laphygma frugiperda) - GEORGIA - Heavy infestations on Coastal Bermuda grass in Jasper and Baldwin Counties and on soybeans in Baldwin County. (Johnson, Milner).

ARMYWORM (Pseudaletia unipuncta) - GEORGIA - Heavy infestations on Coastal Bermuda grass in Baldwin County, 12-15 per square foot. (Johnson).

A GRASSWORM (Mocis sp.) - GEORGIA - Heavy infestations on Coastal Bermuda grass in Baldwin County. (Johnson).

A SPITTLEBUG - GEORGIA - Heavy infestations on Coastal Bermuda grass in Brooks County. (Robertson).

A MITE (Oligonychus gramineus) - NEW MEXICO - Heavy infestations damaging Bermuda grass at Las Cruces, Dona Ana County. (N. M. Coop. Rpt.).

FRUIT INSECTS

CODLING MOTH (Carpocapsa pomonella) - OHIO - Good control obtained by most growers. Most injuries due to second-brood attack. (Cutright). NEW MEXICO - Percentage of "wormy" apples very high in many unattended and improperly treated orchards in Rio Arriba, Sandoval, Bernalillo and San Juan Counties, with 75-100 percent of fruit infested in many orchards. (N. M. Coop. Rpt.). COLORADO - Injury to apples being harvested averaged 0-1 percent in Delta and Mesa Counties. (Colo. Ins. Sur., Sept. 15). OREGON - Infestations lower than normal in treated pear and apple orchards at Hood River. (Ellertson).

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) - OHIO - Third-brood larvae hatching and threatening in some orchards. Injury in northeastern area to date less than one percent. (Cutright). NEW MEXICO - Second generation appears to be very light in Albuquerque area, probably because of adequate control measures. (N. M. Coop. Rpt.).

APPLE MAGGOT (Rhagoletis pomonella) - SOUTH DAKOTA - Infestations heavy on untreated apples in the Brookings vicinity, Brookings County. Up to 100 percent of fruit is infested. (Severin). OHIO - Adults have been taken in traps continuously since early July to September 14. (Cutright). WISCONSIN - Apples taken in Burnett, Douglas, Washburn, Sawyer and Ashland Counties were infested with this species. (Wis. Coop. Sur.).

PLUM CURCULIO (Conotrachelus nenuphar) - SOUTH DAKOTA - Infestations reported in untreated plums in vicinity of Spearfish, Lawrence County. (Hantsbarger). OHIO - Fall feeding frequently noted on apples. (Cutright).

SHOT-HOLE BORER (Scolytus rugulosus) - ALABAMA - Severe infestation in 60 acres of young peach trees in Blount County. (Bagby). SOUTH CAROLINA - Damaging buds of peaches and apples in Orangeburg County. (Nettles et al.).

WOOLLY APPLE APHID (Eriosoma lanigerum) - NEW MEXICO - Generally light to moderate on apple trees in San Juan, Santa Fe, Taos, Rio Arriba, Sandoval and Bernalillo Counties, with several extremely heavy infestations found in apple orchards in Albuquerque area. (N. M. Coop. Rpt.).

SAN JOSE SCALE (Aspidiotus perniciosus) - OREGON - Populations heavy enough in neglected cherry orchards near The Dalles, Wasco County, to cause bronzing of leaves. (Ritcher).

PEAR-SLUG (Caliroa cerasi) - SOUTH DAKOTA - Caused heavy defoliations of cherry trees in Lake County. (Hantsbarger).

GIANT HORNET (Vespa crabro germana) - NORTH CAROLINA - Feeding on apples in Yancey County and present in Halifax County. (Dillingham, Hardee, Farrier).

SPIDER MITES - OHIO - Panonychus ulmi still present in orchards, but doing little damage. Tetranychus telarius infestation is generally quite light. (Cutright). NEW MEXICO - Tetranychus spp. damaged foliage in many apple orchards in Bernalillo, Sandoval and San Juan Counties; leaves brown and covered with webbing. Also damaged prune trees in Rio Arriba County. (N. M. Coop. Rpt.). UTAH - Damage by unspecified species, especially on raspberries, has been less severe in Box Elder, Weber, Utah and Davis Counties this season, than in 1958. Undetermined species have severely discolored foliage in several apple orchards northeast of Provo and at Park City. (Knowlton). OREGON - Tetranychus sp. populations heavy enough to cause bronzing of leaves in neglected cherry orchards near The Dalles, Wasco County. (Ritcher).

AN ERIOPHYID MITE - NEW MEXICO - Heavy infestations damaging prune orchards near Espanola, Rio Arriba County; caused considerable defoliation and fruit to drop or not develop properly. (N. M. Coop. Rpt.).

HICKORY SHUCKWORM (Laspeyresia caryana) - OKLAHOMA - Larvae averaged 5 per 50 pecans checked in Carter County (Meharg) and were heavy on pecans checked at Stigler, Haskell County (Bower, Washum).

WALNUT CATERPILLAR (Datana integerrima) - OKLAHOMA - Heavy on some pecan trees at Lawton. (Hatfield).

PECAN NUT CASEBEARER (Acrobasis caryae) - TEXAS - Light infestation reported in Howard County. (Texas Coop. Rpt.)

WALNUT HUSK FLY (Rhagoletis completa) - UTAH - Severely damaging English walnuts at Ogden. Less severe on black walnuts in the same area and at Provo. (Knowlton).

Citrus Insect Situation, Lake Alfred, Florida, Mid-September, 1959 - PURPLE SCALE (Lepidosaphes beckii) activity decreased and will continue to be low through the fall in all districts. Infestations at lowest point on record; only one-tenth as heavy as the average of previous years. FLORIDA RED SCALE (Chrysomphalus aonidum) activity increased from a low to a high level and will continue high through September. Although infestations are now about average, many groves may be expected to show a rapid increase to high population level in October. An upward trend in activity of CITRUS RED MITE (Panonychus citri) began in early September and will continue through October. CITRUS RUST MITE (Phyllocoptruta oleivora) activity increased slightly and marked the beginning of an upward trend which will accelerate in October. TEXAS CITRUS MITE (Eutetranychus banksi) is increasing and APHID infestations are much more prevalent than usual. (Simanton, Thompson, Johnson).

CITRUS BLACKFLY (Aleurocanthus woglumi) - MEXICO - In chemical and free zones of States of Tamaulipas, Nuevo Leon, Sonora and Baja California, 117,133 citrus trees were inspected on 2,528 properties during August. Four trees with 13 infested leaves found on 3 properties in municipio Hidalgo, Tamaulipas. In Linares, Nuevo Leon, 7 trees found infested on property reported in July. Treatment of all known infestations at Allende, Nuevo Leon, completed during August. Citrus blackfly is reported generally controlled by parasites in biological control zone in Tamaulipas. (PPC, Mex. Reg.). TEXAS - Surveys conducted during August in Cameron, Hidalgo and Webb Counties were negative. (PPC, So. Reg.).

MEXICAN FRUIT FLY (Anastrepha ludens) - Trapping activities continued throughout August in Nogales area of ARIZONA and in San Diego County, CALIFORNIA, with negative results. (PPC, West. Reg.). MEXICO - Trapping operations continued in Ensenada, Tecate and Tijuana, Baja California. Total of 1,894 traps in use on 905 properties and 7,902 trap inspections were made. One A. ludens and one A. mombinpraeoptans caught during August. Both specimens were female and nongravid. (PPC, Mex. Reg.).

LEAFHOPPERS - NEW MEXICO - Undetermined species damaging foliage of grapevines and apple orchards in many areas of the State. (N. M. Coop. Rpt.). IDAHO - Populations of Erythroneura sp. on grapes in the Filer area, Twin Falls County, were greater during 1959 than during 1958. (Portman).

TRUCK CROP INSECTS

TOMATO FRUITWORM (Heliothis zea) - ALABAMA - Causing 5-10 percent damage to fall tomato crops in St. Clair County. (Grimes). NEW MEXICO - Light in several lettuce fields in northern Dona Ana County. Minor problem in tomato fields in Luna, Valencia and Bernalillo Counties. (N. M. Coop. Rpt.). COLORADO - Eggs on tomato plants averaged 15.7 per 100 leaves in Prowers, Bent, Otero, Crowley and Pueblo Counties. (Colo. Ins. Sur., Sept. 15).

BANDED CUCUMBER BEETLE (Diabrotica balteata) - SOUTH CAROLINA - Has been especially abundant in fall cucumber plantings during late August and September in Barnwell County. (Nettles et al.).

MEXICAN BEAN BEETLE (Epilachna varivestis) - WISCONSIN - A delayed report indicates that in a previously infested, relatively isolated and extremely localized area of Shorewood Hills in Madison, this species was more abundant than it has been for several years. (Wis. Coop. Sur.).

GREENHOUSE WHITEFLY (Trialeurodes vaporariorum) - VIRGINIA - Probably this species, heavy on snap beans on the Eastern Shore. (Hofmaster).

N-27708-Reports about insects may come from farmers, county agents, or from Federal or State specialists. Here a survey entomologist examines catch of grasshoppers in his sweep net. The number caught help him to estimate degree of infestation.

Keeping an eye out for INSECTS

Throughout the nation volunteer and professional entomologists - - some 700 strong - - are keeping an eye out for enemy insects and reporting on insect activities. They are part of Insect Survey and Detection, a cooperative State-Federal "intelligence" system as vital to the defense of our crops and livestock as Army Intelligence is to the defense of our country.

About 30 States have cooperatively financed survey entomologists. These, together with scientists in Land-grant colleges, researchers at State and U. S. Department of Agriculture experiment stations, Extension Service specialists, county agricultural agents, and representatives of industry, funnel reports of insect activities along with specimens of insects to State clearing houses. The State clearing officer analyzes the reports and identifies any accompanying insect specimens. When necessary, he warns county agents and local control and regulatory officials of the presence of some insect new to the particular area or new to the United States and of the buildup of economic insect infestations.

The State officer then sends a weekly report of insect conditions to national headquarters - -the Plant Pest Control Division of the Agricultural Research Service in Washington D. C. Here the reports are condensed and included in a weekly publication, the Cooperative Economic Insect Report. The information is organized under headings, such as Cereal and Forage, Fruit, Truck Crops, Forest and Ornamental, Stored Products, and Insects That Affect Man and Animals. Additional information, including informative articles on foreign insects, is also carried in the publication.

The Cooperative Economic Insect Report now reaches about 3,000 persons in Federal and State agencies, industries, farm editors, and other interested individuals. It alerts farmers and pest control officials to possible population increases of destructive insects and enables them to plan insecticide spraying or dusting, and other protective measures. Early detection can lead to early control, before extensive damage has been done, with minimum amounts of control chemicals and at the lowest possible cost.

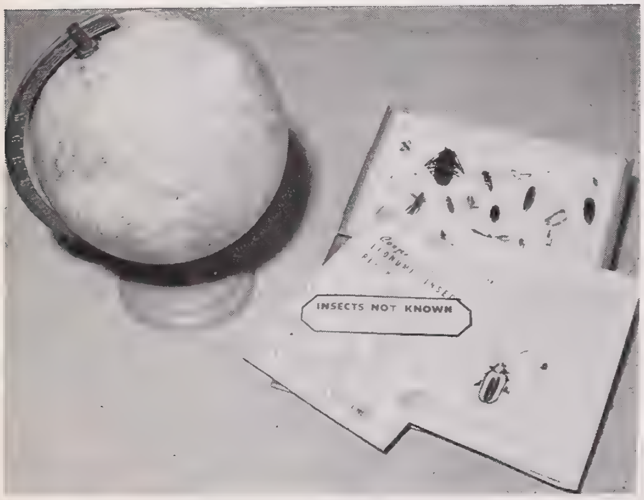
The surveys and warnings that the reports contain, enable manufacturers to plan equipment and chemical inventories to meet farmer's insecticide needs. Research and education centers also find the data helpful in their work.

These photographs describe how the insect survey and detection system works..

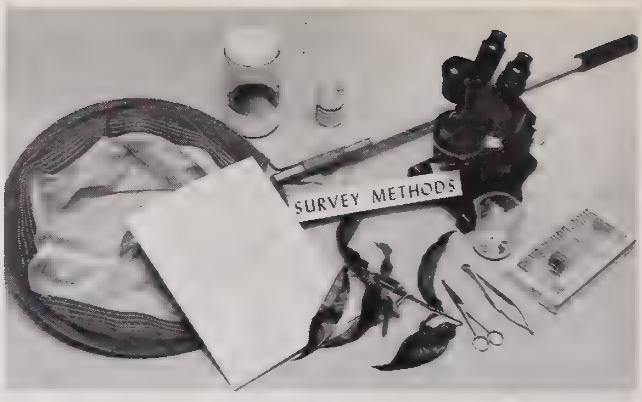
U. S. DEPARTMENT OF AGRICULTURE **Picture Story No. 120**
Office of Information **September 1959**

Magazines and newspapers may obtain glossy prints of any of these photographs from the Photography Division, Office of Information, U. S. Department of Agriculture, Washington 25, D. C. Others may purchase prints (8 x 10) at $1.00 each from the same address.

BN-8675-X -This farmer examines the roots of soybean plants for damage from soil pests. He may find maggots, nematodes, or rootworms. Such pests are often hard to identify so he may ask the aid of his county agent. If the agent does not recognize the pest, he refers samples to specialists for positive determination.



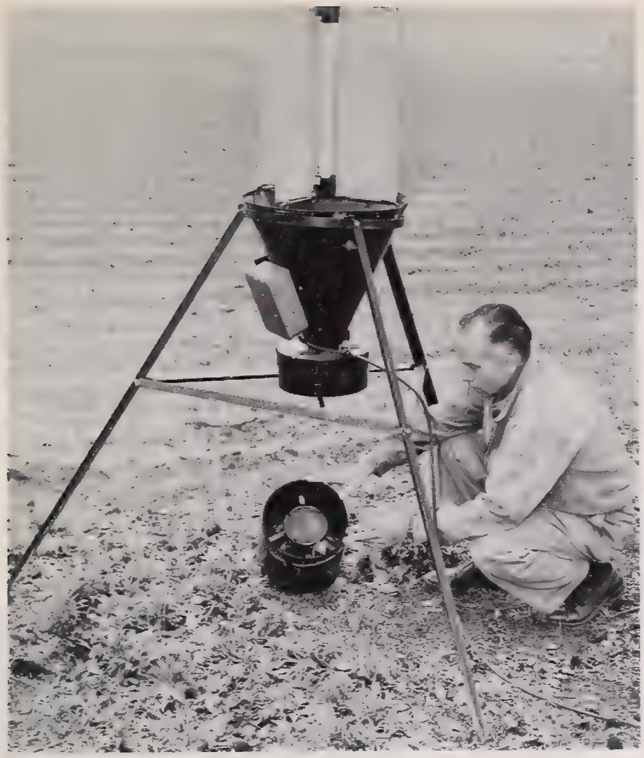
N-33174-Growth of international travel and fast transportation increases the danger of entry and spread of pests new to this country. USDA's plant pest control specialists prepared this publication "Insects Not Known to Occur in the United States" to help entomologists and others to recognize newly introduced pests.



N-33052-Field observers estimate insect numbers and forecast the degree of infestation following methods outlined in this publication "Survey Methods." USDA's plant pest control experts have developed standardized survey methods for about 60 of the economically important insect pests.

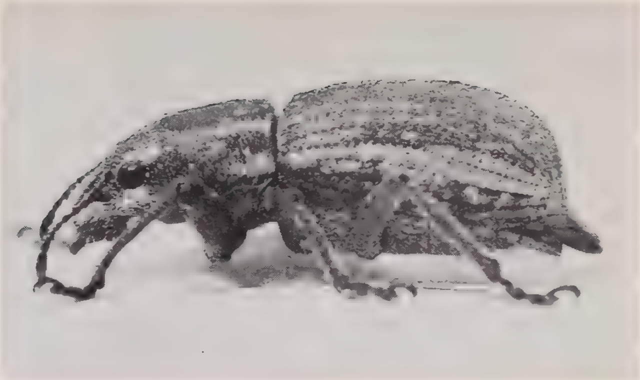
N-18509-Traps baited with chemical attractants are one way of detecting certain insects. Thousands of traps like this one are being used in Florida to protect our citrus industry against the Mediterranean fruit fly.

N-21934-The male gypsy moth, a forest insect, is lured to traps like this by an attractant prepared from the abdominal tips of female gypsy moths. Traps are also used in surveys of the Mexican fruit fly, the Japanese beetle, and other pests.



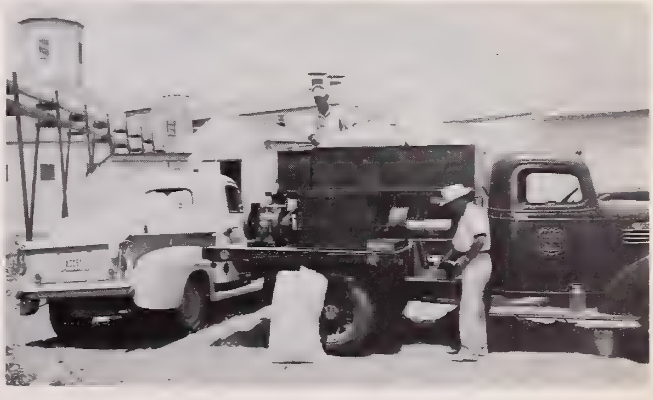
N-14848-Moth catches in light traps placed in strategic places throughout several southern States tell what may be expected from such migrating pests as armyworm, corn earworm, fall armyworm, tobacco hornworm, and related insects.

N-9192-To locate infestations of golden nematode of potato and soybean cyst nematode, soil samples are collected at mapped intervals. The samples are then taken to a laboratory where they are washed, screened, and examined under a microscope for presence of cysts. (Note: nematodes are tiny worms -- not insects)



TX-606-Detection of this insect -- the white fringed beetle -- requires careful search of plant foliage for the beetle, or signs of its feeding. To locate the larvae of the beetle, survey scouts examine the soil around roots of preferred host plants.

N-14427-The seams of burlap bags are a favorite hideout for the khapra beetle, a destructive stored grain pest. The pest also hides in cracks and crevices in grain storage buildings, which must be carefully searched by survey crews.

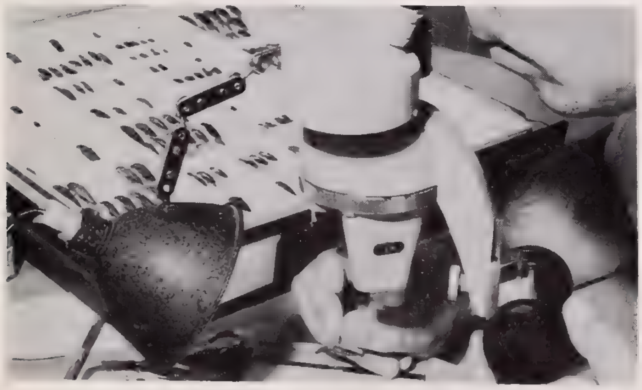


BN-8674-X

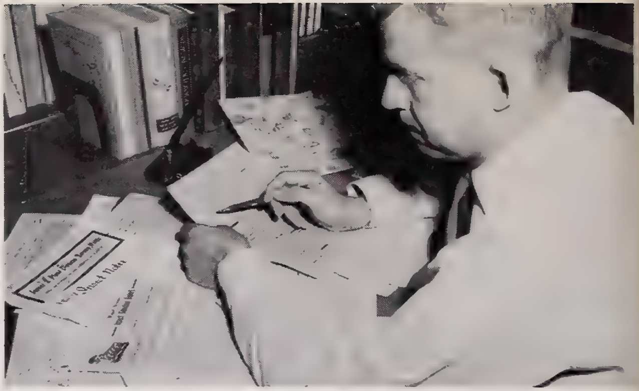
-Cotton gin trash is screened through this machine and inspected for pink bollworm larvae. This is an important method of detecting the pest. Light traps are used in surveys for pink bollworm moth.

N-14841 — Survey scouts collect a two-square yard sample of woods trash containing hibernating boll weevils. Counts of hibernating insect stages per lineal or area unit are used for estimating next season's infestations of European corn borer, grasshoppers, beet leafhopper, as well as boll weevil.

N-10712 — Populations of insects may be estimated by visible damage to host plants. Here the amount of defoliation of trees by gypsy moth larvae tells the trained survey entomologist the severity of the infestation.



N-33173 — Correct identification of collected specimens is important. The aid of highly trained State and Federal insect taxonomic specialists is frequently needed to identify unusual specimens, and the less known life stages of many of our common pests.



BN-33048 — Information on insect conditions collected in these many ways reaches the Survey and Detection Operation of the Plant Pest Control Division in Washington, D. C. Here the reports from all parts of the United States are edited and summarized. Additional informative material on important domestic and foreign pests is also included.

N-33051 — The weekly issue of the Cooperative Economic Insect Report is the end product of this effort. It contains information important to the defense of our food and fiber crops and livestock against destructive insects.

N-32948 — Reports from field entomologists are abstracted and added to this permanent file, which contains information on over 40,000 domestic and foreign insect pest species. These records furnish valuable data on economic importance, distribution, biology, and the general history of a pest.

APHIDS - COLORADO - On potatoes, Macrosiphum solanifolii and Myzus persicae averaged 23.6 per 100 sweeps and 86.5 per 100 leaves in Weld County. (Colo. Ins. Sur., Sept. 15). NEW MEXICO - Aphis gossypii heavy on melons and cucumbers in Bernalillo and Valencia Counties. (N. M. Coop. Rpt.). ALABAMA - Heavy infestation of unspecified species on tomatoes in St. Clair County. (Grimes).

BEET ARMYWORM (Laphygma exigua) - NEW MEXICO - Few light, spotty infestations damaging lettuce in Dona Ana County. (N. M. Coop. Rpt.).

CABBAGE LOOPER (Trichoplusia ni) - VIRGINIA - A polyhedrosis virus has completely controlled infestations on Eastern Shore. The virus is widespread over this area. (Hofmaster). NEW MEXICO - Serious in Dona Ana County lettuce fields; eggs and larvae very abundant. (N. M. Coop. Rpt.).

CABBAGE MAGGOT (Hylemya brassicae) - MISSOURI - Damaging commercial turnip field in Jackson County. (Kyd, Thomas, Munson). WASHINGTON - Large acreages of turnips, rutabagas, cabbage and cauliflower, totally destroyed in Redmond-Woodlinville area despite soil treatments and multiple sprays with chlorinated hydrocarbon insecticides. Tremendous adult populations present. Preliminary results indicate a high level of resistance to the chlorinated hydrocarbons. (Howitt).

POTATO PSYLLID (Paratrioza cockerelli) - COLORADO - Averaged 7.2 per 100 sweeps and 1.1 per 100 leaves on potatoes in Weld County. (Colo. Ins. Sur., Sept. 15).

POTATO TUBERWORM (Gnorimoschema operculella) - VIRGINIA - Another brood of moths present on Eastern Shore and some new field infestations have been observed. (Hofmaster). UTAH - Was not encountered in the State during the 1959 season. (Knowlton, Sept. 10).

FALL ARMYWORM (Laphygma frugiperda) - OKLAHOMA - Larvae averaged 2 per plant on sweetpotatoes in Greer County. (Hatfield).

HORNWORMS - OKLAHOMA - Larvae of an unspecified species averaged 3 per plant on sweetpotatoes in Greer County. (Hatfield). NEW MEXICO - Protoparce sp. has been a problem in untreated chili and tomato fields in Quay, Rio Arriba, Bernalillo and Luna Counties. (N. M. Coop. Rpt.).

FLEA BEETLES - MARYLAND - Phyllotreta sp. abundant on turnips at College Park. (U. Md., Ent. Dept.). OKLAHOMA - Counts of Chaetocnema confinis averaged 2.7 per linear foot of row in a field of sweetpotatoes surveyed in McCurtain County. (Goin).

TOBACCO INSECTS

CORN EARWORM (Heliothis zea) - MARYLAND - Larvae abundant and boring into tobacco leaves and stubble at several localities in Anne Arundel and St. Marys Counties. (U. Md., Ent. Dept.).

COTTON INSECTS

COTTON LEAFWORM (Alabama argillacea) - NORTH CAROLINA - Caused complete defoliation of cotton locally in Jones County and 4-5 larvae on tops of leaves in fields in Wayne County. (Franck, Jones, Farrier). SOUTH CAROLINA - Considerable defoliation of cotton occurring in Clarendon, Dorchester, Colleton and Florence Counties. (Nettles et al., Sept. 9). OKLAHOMA - Counts averaged 3 larvae and 4 pupae per 10 plants in cotton field in Garvin County (Meharg) and 0.5-1 per leaf in field in Pawnee County (Young).

CABBAGE LOOPER (Trichoplusia ni) - CALIFORNIA - Heavy infestations in cotton in Shafter and Delano areas of Kern County. (Cal. Coop. Rpt.).

COTTON LEAF PERFORATOR (Bucculatrix thurberiella) - CALIFORNIA - Heavy breeding continues in cotton plantings in Imperial County. (G. D. Peterson).

SALT-MARSH CATERPILLAR (Estigmene acrea) - CALIFORNIA - Infestations on cotton in Imperial County still increasing. Proper timing of treatment giving good control. (G. D. Peterson).

BOLLWORM (Heliothis zea) - CALIFORNIA - Heavy infestations in cotton in Shafter and Delano area of Kern County. (Cal. Coop. Rpt.).

PINK BOLLWORM (Pectinophora gossypiella) - ARIZONA - On September 12, one female moth was caught in light trap in thurberia along Rincon Mountains in Pima County. This is second moth collection in this location during 1959, the first was on July 3. On September 14, one larva found in gin trash from farm one mile south of 1958 infestation at Mesa, Maricopa County. (PPC). Inspections in ALABAMA, GEORGIA and MISSISSIPPI during August were negative. Number of sites inspected and acres involved are as follows: Alabama - 254 sites and 109,821 acres; Georgia - 147 sites and 69,048 acres; Mississippi - 470 sites and 5,086 acres. Inspections in OKLAHOMA were limited to Garvin, Kiowa and Tillman Counties. In Tillman County, one lint cleaner inspection was found to be positive and represents 7,002 acres of initial infestation in that county. In TEXAS, 461,201 acres at 927 locations were inspected and 288,481 acres at 208 locations found infested. (PPC, So. Reg., Aug. Rpt.). MEXICO - Within the regulated area in states of Tamaulipas, Coahuila, Durango, Chihuahua and Nuevo Leon, 191 locations involving 138,932 acres of cotton in 24 municipios inspected. Of these, 153 locations involving 130,406 acres in 21 municipios found infested. Repeat inspections made at 41 locations in 5 municipios. Heaviest infestations found in La Laguna region of Coahuila and Durango, being higher than in recent years. Some fields in Municipio Matamoros, Coahuila, have 78 percent of green bolls infested while average for municipio is 37 percent. Some other municipios in La Laguna have up to 25 percent infestation. Outside regulated area in states of Sinaloa and Sonora, 45 locations involving 269,100 acres in 8 municipios inspected with negative results. In eastern area, stalk destruction is progressing normally, but in Culiacan zone in western area, rains prevented complete stalk destruction and have caused stubbed stalks to sprout. Plowup is 95 percent complete in this zone, however. (PPC, Mex. Reg., Aug. Rpt.).

BOLL WEEVIL (Anthonomus grandis) - OKLAHOMA - Counts averaged 95 percent infestation of squares in field of late cotton in McCurtain County (VanCleave, Goin, Drew); 17 percent in irrigated cotton field in Tillman County; and 85 percent in field in Greer County (Hatfield). SOUTH CAROLINA - Heavy infestation caused one of the most extensive late treatment programs ever experienced in McCormick County and buildup was tremendous in late July and early August in Orangeburg County. (Nettles et al.).

LYGUS BUGS (Lygus spp.) - CALIFORNIA - Continue to damage small cotton bolls in San Joaquin Valley. (T. Leigh).

APHIDS - CALIFORNIA - Continue to increase many cotton fields in Kerman-Kearney Park area of Fresno County. (L. A. Ruud).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

SPRUCE BUDWORM (Choristoneura fumiferana) - NEW MEXICO - Survey indicates an approximate 3-fold increase in number of egg masses in 1959 as compared to 1958 on about 600,000 acres in the northern part of the State. (N. M. Coop. Rpt.).

PINE TIP MOTHS - VIRGINIA - High populations continue in coastal areas and are widespread and increasing throughout the southeast portion of the State on loblolly pines and on slash pines in Norfolk. In Accomack County, activity is reported in 4 separate areas ranging in size from 5 to 50 acres, infesting 20-80 percent of trees. (Va. Div. For., Aug. Summ.).

A FIR CONE MOTH (*Barbara colfaxiana*) - CALIFORNIA - In combination with a chalcid, is locally damaging Douglas-fir cones in the Hyampom district, Shasta-Trinity forest. Observations show damage to be spotty and progressively more severe east of Orleans, Humboldt County. (K. M. Estes, T. W. Koerber).

BARK BEETLES - VIRGINIA - *Ips* spp. active throughout Mecklenburg County, killing individual and small groups (up to 3) of shortleaf & loblolly pines. Larvae and adults present as of September 1. (Va. Div. For., Aug. Summ.). ARKANSAS - *Ips* spp. infesting young pine stands in south Logan County. Appear to be result of too thick stands. (Warren, Barnes). *Ips* spp., *Platypus* spp. and *Dendroctonus terebrans* damaging pines in Calhoun County. This infestation may be the result of spraying to kill hardwoods for timber improvement which resulted in weakening pine trees. (Warren). OKLAHOMA - *D. terebrans* damaged 2 trees and *Ips* sp. damaged 3 trees in an 80-acre grove of 15-year-old pine trees checked in Pushmataha County. (Goin). NEW MEXICO - Moderate to heavy infestations of *D. englemanni* present on about 10,000 acres of private land near Chama, Rio Arriba County. (N. M. Coop. Rpt.). CALIFORNIA - *D. monticolae* causing serious damage to lodgepole pine in a 15-acre camp ground in Silver Lake area, Plumas County. Many trees already dead with considerably more affected in this high usage area. (G. Ingco). Potential serious damage later in fall is indicated in many areas. Drought conditions are weakening many trees to point where they are becoming attractive to insect damage. (Cal. Coop. Rpt.).

A FLATHEAD BORER (*Buprestis aurulenta*) - CALIFORNIA - Damaging diagonal sheathing and studs in a 25-year-old house by honey-combing old Douglas-fir boards in Big Bar Ranger Station, Trinity County. This is an interesting record of the long period of development of this species in well-seasoned wood. (J. O'Keefe, C. B. Eaton).

AN APHID (*Pineus* sp.) - WASHINGTON - All stages infesting boles of 10-12 inch grand and Pacific silver firs at Centralia and Curtis, August 25. (Johnson).

A FIR SEED CHALCID (*Megastigmus spermotrophus*) - CALIFORNIA - This species, in combination with a fir cone moth, locally damaging Douglas-fir cones in the Hyampom district, Shasta-Trinity forest. Observations show damage to be spotty and progressively more severe east of Orleans, Humboldt County. (K. M. Estes, T. W. Koerber).

GYPSY MOTH (*Porthetria dispar*) - NEW JERSEY - At Jockey Hollow National Park, Morris County, 2 additional male moths were caught after moth captures were made in the same vicinity during July. To date, a total of 5 male moths were caught in 5 traps within and adjacent to the park. A male moth was taken in a trap at Minisink Island, Montague, July 31, and another on an island in the Delaware River, August 26, about one and one-half miles south of Montague. VERMONT - Two male moths were caught in a trap at Stowe and one at Walcott. MAINE - No moths were caught in Aroostook and Penobscot Counties. CONNECTICUT - One tree found with over 200 egg clusters. (PPC, East. Reg., Aug. Rpt.). MICHIGAN - During the week ending August 11, 91 egg masses were found 100 yards north of the trap collection in Windsor Township, Eaton County. Female moths were still emerging and egg laying continued. A recap of the total of 43 moths caught in the State during this season shows 39 were caught in Eaton County and 4 in Calhoun County. (PPC, Cent. Reg., Aug. Rpt.).

FALL WEBWORM (*Hyphantria cunea*) - OKLAHOMA - Common on a wide variety of native trees throughout central and southeastern areas. Some small trees completely defoliated. (Goin, VanCleave, Drew). VIRGINIA - Widespread on elm and birch in Fauquier and Loudoun Counties, causing light defoliation. (Va. Div. For., Aug. Summ.).

APPLE LEAF SKELETONIZER (Psorosina hammondi) - KANSAS - Larvae, probably this species, causing considerable damage to elm trees in Leavenworth County. Approximately 75 percent of the leaves are at least 50 percent skeletonized. (Thompson).

WEBWORMS (Tetralopha spp.) - MARYLAND - Larvae of Tetralopha sp. injuring sugar maple at Oakland. (U. Md., Ent. Dept.). FLORIDA - T. militella reared from American planetree in the Gainesville area, Alachua County, May 1959. Det. C. P. Kimball. This is a new State record for this species. (Fla. Coop. Sur.).

AILANTHUS WEBWORM (Atteva aurea) - MARYLAND - Larvae infesting ailanthus at Laurel, Prince Georges County. (U. Md., Ent. Dept.).

A BOSTRICHID (Sinoxylon conigerum) - FLORIDA - Collected boring in sapodilla (Achras sapota) at Miami, Dade County, August 10, 1959. Det. T. J. Spilman. The tree is 8-10 feet tall with emergence holes spaced about 10 inches apart in the top part of the stem. This insect appears to be the only cause of death. The species is common in India and is widespread in the tropics. It has been intercepted many times at ports of entry, but this report appears to be the first record of the establishment of the species in the United States. (Fla. Coop. Sur.).

LOCUST LEAF MINER (Chalepus dorsalis) - VIRGINIA - Active in northern portion of State, particularly in Loudoun, Fauquier and Rappahanock Counties. (Va. Div. For., Aug. Summ.).

POPLAR AND WILLOW BORER (Sternochetus lapathi) - SOUTH DAKOTA - Heavy infestations present on cottonwoods in the Potter County area. (Hantsbarger).

SYCAMORE LACE BUG (Corythucha ciliata) - OKLAHOMA - Medium on some sycamore trees in Duncan. (Hatfield, Brown). SOUTH CAROLINA - Causing yellowing of foliage in various parts of the State. (Nettles et al.).

SCALE INSECTS - MARYLAND - Unaspis euonymi heavy on euonymus at several localities in Prince Georges County and at Baltimore. Males abundant. (U. Md., Ent. Dept.). CALIFORNIA - Targionia dearnessi medium on big sagebrush (Artemisia tridentata) in Jess Valley, Modoc County. (Cal. Coop. Rpt.).

INSECTS AFFECTING MAN AND ANIMALS

A MUSCID (Musca autumnalis) - OHIO - Populations on cattle have decreased sharply with onset of cool weather. Numbers moderate at Wooster, Wayne County, on September 14, but very few remained by September 17. (Treece). INDIANA - Counts ranged 3-22 per head of beef cattle on pasture in northern Putnam County. (Matthew). None observed in southern third of State. (Dobson). ILLINOIS - Infestation apparently extends from a line through the southern limits of Greene, Montgomery, Jasper and Crawford Counties, northward. As previously reported, the infestation is heavier in the eastern portion of the State. (Ill. Ins. Rpt.). WISCONSIN - This species has not been found present thus far in collections of flies made in areas where cattle have had pink eye. (Wis. Coop. Sur.).

HOUSE FLY (Musca domestica) - OKLAHOMA - Counts averaged 2 per square foot in sunny areas checked in downtown areas of some towns in southeastern part of the State. (VanCleave, Drew, Goin).

MOSQUITOES - NORTH CAROLINA - Psorophora confinnis biting in Moore County and larvae of Anopheles punctipennis and Aedes vexans collected in a road rut in the same county. (Mead). OKLAHOMA - Psorophora sp. continued to cause annoyance to residents in Stillwater. (VanCleave). CALIFORNIA - Populations of unspecified species remain unchanged. A few cool nights apparently decreased activity, but residents in many areas are again being annoyed. (Vector Control).

EYE GNATS (Hippelates spp.) - SOUTH CAROLINA - Have been at peak abundance in Darlington County for the past 6 weeks. (Nettles et al.).

HORN FLY (Siphona irritans) - INDIANA - Counts ranged to highs of 300 per animal on unsprayed beef animals on pasture in Dubois County. (Dobson). OKLAHOMA - Counts averaged 175 per animal on range cattle checked throughout the southeastern area (Goin, VanCleave, Drew) and ranged 50-100 per animal on 2-year-old steers and cows checked in Pawnee County (Young). NEW MEXICO - Has been very annoying to cattle throughout the State. (N. M Coop. Rpt.).

SCREW-WORMS (Callitroga spp.) - NEW MEXICO - Numbers of infested animals appear to be lower than in 1958. Most counties report only an occasional infestation. (N. M. Coop. Rpt.).

SHEEP KED (Melophagus ovinus) - IDAHO - Heavy on large flocks of sheep in the Kimama area, Minidoka County, with up to 60 engorged individuals per sheep. (Priest).

STABLE FLY (Stomoxys calcitrans) - OKLAHOMA - Populations heavy on dairy cattle checked in Pawnee County. (Young).

TABANIDS - OKLAHOMA - Populations of Tabanus sulcifrons, T. atratus and T. lineola complex caused a nuisance to range cattle throughout southeastern area. Counts ranged 0-12 per animal (averaged one per animal) on cattle. (Goin, VanCleave, Drew). T. sulcifrons ranged 1-4 per beef animal in lowland pastures in Pawnee County. (Young).

FLIES - NORTH DAKOTA - Reported as being numerous in many localities. (N. D. Ins. Rpt.). NEW MEXICO - Populations of several species very annoying in and around homes throughout the State. (N. M. Coop. Rpt.). UTAH - A serious problem in parts of Carbon, Washington, Iron, Kane, Wasatch and Emery Counties. (Knowlton, Sept. 10).

LONE STAR TICK (Amblyomma americanum) - OKLAHOMA - Populations decreasing in southeastern area. (Goin).

STORED-PRODUCT INSECTS

KHAPRA BEETLE (Trogoderma granarium) - MEXICO - Surveys were conducted during August in states of Baja California, Sonora, Jalisco and Chihuahua. No positive determinations were received during August. Since the completion of eradication fumigations in June, there have been no known khapra beetle infestations in the Republic of Mexico. Extensive surveys and inspections continue in progress. (PPC, Mex. Reg., Aug. Rpt.). TEXAS - Surveys continued during August in State. No new infestations found in El Paso. (PPC, So. Reg.). ARIZONA - Two new infestations found during August, one each in Pinal and Yuma Counties. (PPC, West. Reg.).

SAW-TOOTHED GRAIN BEETLE (Oryzaephilus surinamensis) - NORTH CAROLINA - Infestation present in 1,000 bushels of wheat in Wake County. (Scott, Weisman). SOUTH CAROLINA - Infesting several stored-products in homes in Aiken County. (Nettles et al.).

BENEFICIAL INSECTS

LADY BEETLES - NORTH DAKOTA - Unspecified species averaged one per 25 sweeps in alfalfa fields checked. (N. D. Ins. Rpt.). NEBRASKA - Undetermined species averaged 2 per 10 sweeps in most southeastern counties. (Webb). ARKANSAS - Primarily Hippodamia spp., averaged 15-20 adults and 5-6 larvae per 10 sweeps in alfalfa in the northwest part of the State. (Ark. Ins. Sur.).

OKLAHOMA - Populations very light (up to 0.3 per sweep) in alfalfa fields surveyed in southeastern area. Coleomegilla maculata was most common species, with Hippodamia convergens found only occasionally. (VanCleave, Goin, Drew). TEXAS - Pupal cases of unspecified species reported in Midland County. (Texas Coop. Rpt.).

A BIG-EYED BUG (Geocoris punctipes) - ARKANSAS - Averaged 20-25 per 10 sweeps in northwest area alfalfa. (Ark. Ins. Sur.)

FLOWER BUGS (Orius spp.) - ARKANSAS - O. insidiosus averaged 5-10 per 10 sweeps on alfalfa in northwest area. (Ark. Ins. Sur.) NEBRASKA - Orius spp. averaged 2 per 10 sweeps in southeastern counties in alfalfa fields. (Webb).

NABIDS (Nabis spp.) - NORTH DAKOTA - Populations ranged 0-2 per 25 sweeps. (N.D. Ins. Rpt.). NEBRASKA - Counts averaged 4 per 10 sweeps in most southeast counties. (Webb). ARKANSAS - Present in small numbers (2-3 per 10 sweeps) in northwest area alfalfa. (Ark. Ins. Sur.). OKLAHOMA - Counts averaged 0.8 per sweep in alfalfa fields surveyed in southeastern area (VanCleave, Goin, Drew) and 0.6 in a Jackson County alfalfa field (Hatfield).

LACEWINGS (Chrysopa spp.) - NORTH DAKOTA - Counts averaged 1-2 per sweep in eastern area alfalfa fields. (N. D. Ins. Rpt.). ARKANSAS - Larvae averaged 2-4 and adults 6-8 per 10 sweeps in alfalfa in northwest part of the State. (Ark. Ins. Sur.). OKLAHOMA - Light numbers (up to 0.4 per sweep) present in approximately one-half of alfalfa fields surveyed in southeastern area. (VanCleave, Goin, Drew).

A GORSE WEEVIL (Apion ulicis) - OREGON - Population about four times as numerous as at this time in 1958 at the release point 8 miles north of Bandon on Seven Devils Road. Population now occurs in total area of about one and one-half square miles. Numbers at original release point southwest of Bandon, near old airport, not markedly increased over those of 1958. (Eppley).

A TACHINID (Trichopoda pennipes) - NORTH CAROLINA - Caused marked reduction in squash bug population in Duplin County in a two-week period. (Daugherty).

MISCELLANEOUS INSECTS

JAPANESE BEETLE (Popillia japonica) - Adults were trapped or collected in 32 localities in 13 counties of western NEW YORK located outside the regulated area. Heavy beetle flight was reported in the western regulated area at Rochester and South Buffalo. Surveys revealed heavy concentrations in Bristol and Appalachia, VIRGINIA, and along the Kanawha River, northwest of Charleston, WEST VIRGINIA. A total of 46 beetles were caught in nonregulated areas of MAINE and 30 in VERMONT. (PPC, East. Reg. Aug. Rpt.). The total number of new infestations in the Central Region involves 16,385 acres at 69 locations, as follows: ILLINOIS, 1,625 acres at 12 locations; INDIANA, 65 acres in 16 localities; KENTUCKY, 684 acres in 5 localities; MICHIGAN, 12,304 acres at 10 locations; MISSOURI, 65 acres in 2 locations; and OHIO, 1,642 acres in 23 locations. (PPC, Cent. Reg., Aug. Rpt.). Found established for first time in TENNESSEE during August in Johnson County, at Bloomery and Sutherland. Infestations rather serious. (PPC, So. Reg.).

OLD-HOUSE BORER (Hylotrupes bajulus) - MARYLAND - Larvae infesting floor joists in a home at Landover, Prince Georges County. (U. Md., Ent. Dept.).

A SCOLYTID (Monarthrum fasciatum) - PENNSYLVANIA - Heavy infestation reported in mahogany lumber at York, August 27. Country of origin and degree of seasoning of lumber not known. This species was reported from the same area in February 1951. (Balsbaugh).

AQUATIC INSECTS - RHODE ISLAND - Mainly Chironomidae, with some Trichoptera, causing costly economic damage to fabrics in a large textile mill. Attracted by lights, insects get on cloth and rollers. Those with green body fluids cause stains that cannot be removed from the cloth. (Mathewson, Sept. 1).

A SOLDIER FLY (*Hermetia illucens*) - NORTH CAROLINA - Larvae, probably this species, infesting poultry feed in Wake County. (Scott, Farrier).

VESPIDS - MARYLAND - Yellow jackets continue to be annoying around homes in central counties. (U. Md., Ent. Dept.).

IMPORTED FIRE ANT (*Solenopsis saevissima richteri*) - Treatments during August were as follows: ALABAMA - 14,219 acres; FLORIDA - 5,406 acres; GEORGIA - 1,128 acres; LOUISIANA - 2,885 acres; MISSISSIPPI - 573 acres; TEXAS - 5,564 acres. No new counties found infested during August. (PPC, So. Reg.).

AN EARTHWORM MITE (*Fuscuropoda agitans*) - NORTH CAROLINA - Infesting an earthworm bed in Sampson County. (Scott, Farrier).

CORRECTIONS

CEIR 9(36):819 and 832 - A TICK, Ornithodorus coriaceus, should read Ornithodoros coriaceus.

CEIR 9(36):832 - A REDUVIID (Rasahus throacicus) should read A REDUVIID (Rasahus thoracicus).

CEIR 9(37):852 - A KATYDID (Meconema thalassina) should read A KATYDID (Meconema thalassinum). This correction also applicable under INSECT DETECTION on "highlight" page.

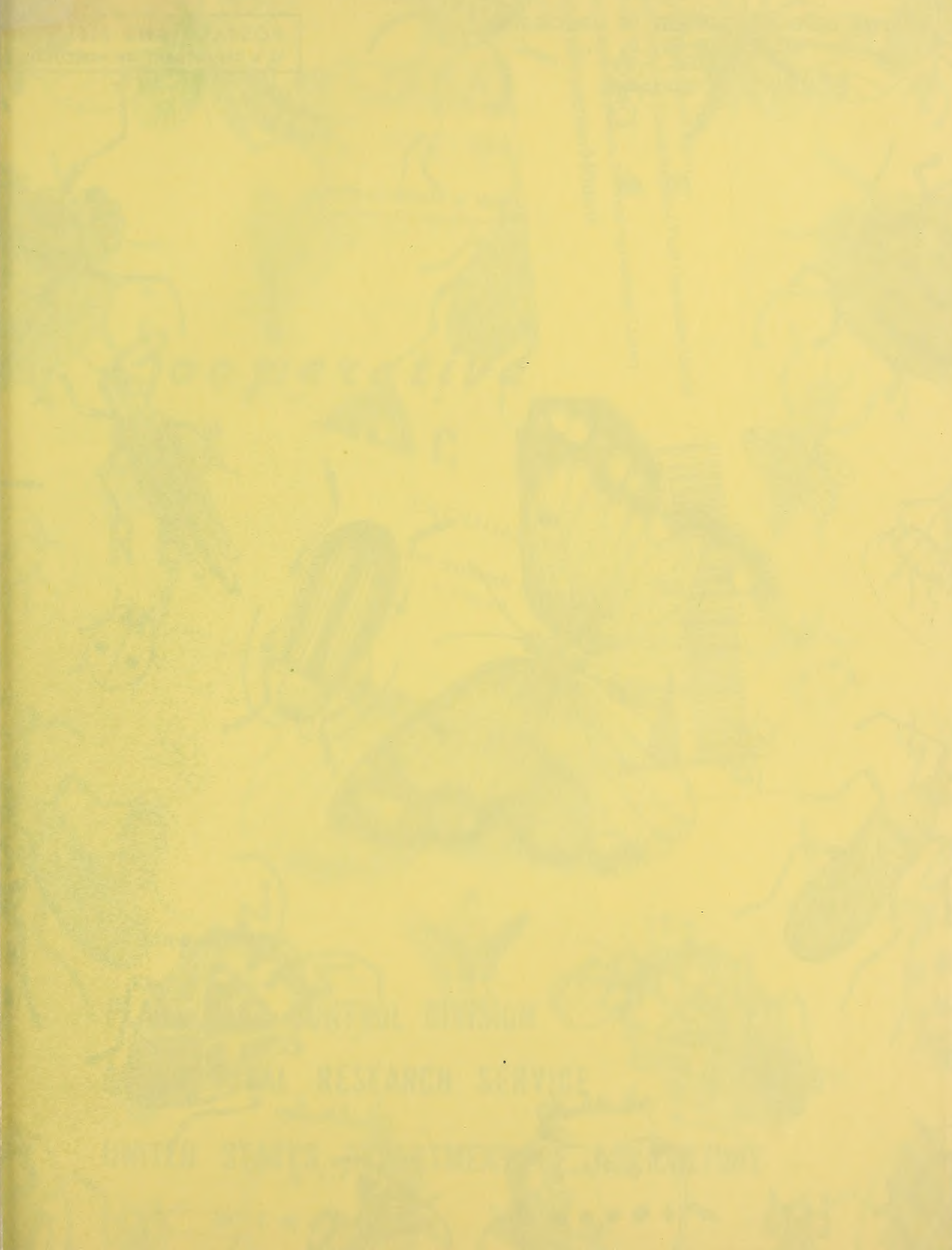
ADDITIONAL NOTES

ARIZONA - SPOTTED ALFALFA APHID (*Therioaphis maculata*) is medium in a few central area alfalfa fields, but infestations are generally low over State. ALFALFA CATERPILLAR (*Colias philodice eurytheme*) infestations in southeastern area alfalfa are continuing heavy, with some larval counts averaging up to 60 per 10 sweeps. Infestations decreased in central and southwestern areas. THREE-CORNERED ALFALFA HOPPER (*Spissistilus festinus*) infestations in alfalfa are medium to heavy, statewide. YELLOW-STRIPED ARMYWORM (*Prodenia ornithogalli*) infestations medium in some alfalfa fields in central area; counts 12 larvae per 10 sweeps. SALT-MARSH CATERPILLAR (*Estigmene acrea*) infestations in cotton have increased, but biological control is sufficient to prevent heavy migration. Adults and egg masses are abundant in cotton in central and southwestern areas. COTTON LEAF PERFORATOR (*Bucculatrix thurberiella*) infestations in central and southwestern area cotton remain medium to heavy in many fields; however, most populations beginning to decline. Infestations of LYGUS BUGS (*Lygus* spp.) are decreasing in many cotton fields, particularly in southeastern area where most cotton has "cut out". Fields still squaring heavily in central and southwestern areas of State show high percentage of punctured squares, counts averaging 40-50 percent. COTTON LEAFWORM (*Alabama argillacea*) infestations medium in few Graham County fields, but are generally light in southeastern area. Light to medium BOLLWORM (*Heliothis zea*) infestations continue in cotton statewide, with some damage still occurring in late fields. Light CABBAGE LOOPER (*Trichoplusia ni*) infestations continue to trouble lettuce plantings in Maricopa and Cochise Counties. RHODES-GRASS SCALE (*Antonina graminis*) is heavy on some St. Augustine grass lawns and THRIPS are heavy in Bermuda grass lawns in Maricopa County. BROWN DOG TICK (*Rhipicephalus sanguineus*) populations heavy and troublesome around homes in central area. Heavy migration of PAINTED-LADY (*Vanessa cardui*) adults observed near Superior in Pinal County. (Ariz. Coop. Sur.).

LIGHT TRAP COLLECTIONS

	Pseud.	Agrot.	Laphyg.	Perid.	Protoparce		Heliothis	
	unip.	yps.	frug.	marg.	quinq.	sexta	zea	vires.
ALABAMA								
Auburn 9/8,11	6		25		4		60	4
ARKANSAS								
Fayetteville 8/27-9/16	72	56					1240	
Hope 8/27-9/16	66	84		30			400	
Kelso 8/27-9/16	19	17					190	
Morrilton 9/2-17	76	66					511	
COLORADO								
Longmont 9/2-8							7	
FLORIDA								
Gainesville 9/8	3							
Quincy 8/24,31,9/8	3	6				13	126	6
ILLINOIS								
Urbana 9/11-17	3	4	6	14			23	
MARYLAND								
Upper Marlboro 9/3-11	16	8	4	2	23	10	18	
MISSOURI								
Columbia 9/14-19	9	14	17				42	
SOUTH CAROLINA								
Charleston 9/14-20	2	4	4				3	1
Clemson 9/12-18	86	42	31	1	2		11	2
TEXAS								
Brownsville 8/31-9/4, 9/8-11		7	131			15		
Waco 9/12-18	643	9		276			291	11
UTAH								
Ogden 9/1-9							12	
Spanish Fork 9/1-9							2	

ADDITIONAL COLLECTIONS - COTTON LEAFWORM (*Alabama argillacea*) - SOUTH CAROLINA, Charleston (9/14-20) - 1; Clemson (9/12-18) - 1; TEXAS, Brownsville (8/31-9/4) - 156; Waco (9/12-18) - 1909. SALT-MARSH CATERPILLAR (*Estigmene acrea*) - TEXAS, Brownsville (8/31-9/4,9/8-11) - 112; Waco (9/12-18) - 8. VELVETBEAN CATERPILLAR (*Anticarsia gemmatalis*) - Charleston (9/14-20) - 15.



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